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10/826,519	04/16/2004	Qiang Li	U001 100084	1942

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UTSTARCOM, INC.
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EXAMINER

ANWARI, MACEEH

ART UNIT	PAPER NUMBER
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2444

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/826,519	Applicant(s) LI ET AL.	
	Examiner MACEEH ANWARI	Art Unit 2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/2/2004, 11/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to communications file on 4/16/2004. Accordingly, **claim(s) 1- 27** are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1- 27** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding **claims 1 and 10**, the applicant has stated “a plurality of independent media stations...each having a media director and a second plurality of media engines.” It is unclear whether the applicant intends that the media stations have (within them) a plurality of media engines or whether there is a second (separate/different) plurality consisting/comprising of media engines. The examiner will interpret these claims in the broadest reasonable sense.

5. Furthermore, regarding **claim 10**, the applicant states, “storing the media content on the selected media engine,” and further along states, “storing the location of all media content in the media stations in the media location registry.” It is unclear whether the storing of the content is in media engine or in the media station. The examiner will interpret these claims in the broadest reasonable sense.

6. **Claims 20, 23- 24** recite the limitation “the MD” and/or “the MLR”. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1- 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeFreese et al.** (hereinafter **DeFreese**, U.S.Pat. No.: 6, 493, 876 B1) as applied to and further in view of **Wilson** (U.S. Pub. No.: 2002/0184649 A1).

9. Regarding **claim 10**, **DeFreese** discloses: A method for distributed media streaming over a media content distribution system comprising the steps of:

providing a communications network (**DeFreese: Fig. 2; communication network**);

connecting a plurality of independent media stations to the network, each having a media director and a second plurality of media engines (**DeFreese: Fig. 2; cable headend for services and overall control**);

providing at least one distribution center communicating over the network and having a media location registry (**DeFreese: Fig. 2; Distribution hubs**);

downloading content to be presented (**DeFreese: Abstract; delivery of high quality television programs, cable and online services**);

communicating from the media location registry to a media director in each media station the downloaded content to be distributed (**DeFreese: Fig. 1- 2 and col. 3**

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line 48– col. 4 line 6; communications network with various data forwarding channels);

directing through media directors in the media stations independent retrieval over the network of downloaded content by at least one selected media engine (**DeFreese: Fig. 2 and Abstract; video on demand and pay per view programming);**

storing the media content on the selected media engine (**DeFreese: Fig. 1-3; memory management unit);**

tracking content stored on the media engines in the respective media director (**Wilson: Fig. 11-12 and Abstract; PIDs);**

storing the location of all media content in the media stations in the media location registry (**Wilson: Fig. 11-12 and Abstract; PID and program tables);**

redirecting a content request from a media console connected to a media station through the network to a selected one of the media engines storing content corresponding to the request for streaming (**DeFreese: Abstract and Col. 11 lines 11-36; PPV, NVOD, VOD and MPEG-2 transport stream);**

streaming media content over the network from the selected media engine to the media console (**DeFreese: Abstract and Col. 11 lines 11- 36; MPEG-2 transport stream).**

However, **DeFreese** remains silent on the specific teachings of tracking content stored on the media engines in the respective media director; and storing the location of all media content in the media stations in the media location registry.

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In the same field of endeavor, **Wilson** discloses tracking content stored on the media engines in the respective media director (**Wilson: Fig. 11-12 and Abstract; PIDs**); and storing the location of all media content in the media stations in the media location registry (**Wilson: Fig. 11-12 and Abstract; PID and program tables**).

Accordingly it would have been obvious to one of ordinary skill in the networking art to combine **Wilson's** the association of packet identifiers to session numbers with the teachings of **DeFreese** to provide for a more transparent system.

10. Regarding **claim 11**, **DeFreese-Wilson** further disclose: wherein the step of downloading content comprises the steps of:

transferring metadata of a program to a content manager (**DeFreese: Fig. 14, 16 & 30 and Abstract; program active listings/timings**);

instructing a content engine to transfer the program data into a Home Media Station (**Wilson: Fig. 1; DHCT**);

updating the state of the program to "inactive" and specifying a publish time to the content manager (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

sending distribution parameters to the media location register (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

distributing the program (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

sending a "publish" command to all media stations at the publish time to start the service of the program (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**).

11. Regarding **claim 12, DeFreese-Wilson** further disclose: wherein distributing the program comprises the steps of:

directing the media director in a seeking media station to obtain the program including identifying a source media station where the content is present (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand and active program listings/timings**);

requesting from the media director of the source media station the location of the needed segment (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand and active program listings/timings**);

notifying the seeking media director of the location of the segment in selected media engine (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

directing by the seeking media director a receiving media engine in the seeking media station to fetch the segment from the selected media engine (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting by the receiving media engine a copy of the segment from the selected media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand and active program listings/timings**);

transferring the segment from the selected media engine to the receiving media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand and active program listings/timings**);

notifying the seeking media director that the copying of the segment is complete; and, notifying the media location register of the new location of the segment for addition to the location database (**Wilson: Fig. 11-12 and Abstract; PID and program tables**).

12. Regarding **claim 13, DeFreese-Wilson** further disclose: wherein the source media station is a home media station in the distribution center (**Wilson: Fig. 1; DHCT**).

13. Regarding **claim 14, DeFreese-Wilson** further disclose: wherein content requested by the media console is not present on the media station and comprising the steps of:

receiving a streaming request through the media director (**DeFreese: Abstract; NVOD, VOD and PPV**);

querying the media location registry for the location of the program or segment requested (**Wilson: Fig. 11-12 and Abstract; PID and program tables**); responding from the media location registry with source media station locations for the segment (**Wilson: Fig. 11-12 and Abstract; PID and program tables**); selecting a source media station by the media director (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting the location of the segment from a media director in the source media station (**Wilson: Fig. 11-12 and Abstract; PID and program tables**); responding with

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the address of a source media engine having the segment (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

directing a selected target media engine to fetch the segment; requesting by the target media engine a copy of the segment from source media engine (**DeFreese: Fig.**

14, 16 & 30 and Abstract; near video on demand and active program

listings/timings); sending the segment to the target media engine (**DeFreese: Fig. 14,**

16 & 30 and Abstract; near video on demand and active program

listings/timings); notifying the media director of completion of the copy and notifying

the media location register of the new location of the segment(**DeFreese: Fig. 14, 16 &**

30 and Abstract; near video on demand, program active listings/timings and

messaging/warning mechanisms).

14. Regarding **claim 15, DeFreese-Wilson** further disclose: wherein the step of selecting a source media station further comprises the steps of:

identifying multiple locations where the desired segment is stored (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active**

listings/timings and messaging/warning mechanisms);

calculating the relative cost of obtaining the desired copy of the segment based on predetermined parameters including the bandwidth available, distance from the source media station, copying time and load of the source media station (**DeFreese:**

Fig. 14, 16 & 30 and Abstract; near video on demand, program active

listings/timings and messaging/warning mechanisms).

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15. Regarding **claim 16, DeFreese-Wilson** further disclose: wherein the steps of redirecting a content request and streaming media content comprise the steps of:

receiving a request for a first segment by the media director from the media console (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

identifying the location of the first segment in a segment location table (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

redirecting the media console to the IP address of a first media engine (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting the first segment from the first media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

streaming data from the first media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

detecting the segment being streamed as near its end (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

requesting the location of the next segment from the Media director (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

locating the next segment in the segment location table (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

replying with the identification of the next segment and the IP address of a second media engine where the next segment resides (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

notifying the second media engine to preload the next segment (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

upon completion of the streaming of the first segment, directing the second media engine to start streaming the next segment to the IP address of the media console (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

streaming the data of the next segment from the second media engine to the media console (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

upon assumption of the communication of the stream with the Media console by the second media station, notifying the media director (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**).

16. Regarding **claim 17, DeFreese-Wilson** further disclose: wherein the steps of detecting the segment being near its end through notifying the media director are repeated until the media console orders a cessation of streaming by the media engine at which time the media engine notifies the media director that the streaming has stopped (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**).

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17. Regarding **claim 18, DeFreese-Wilson** further disclose: wherein the segment location table identifies a plurality of media engines in which the segment is stored and in which the step of identifying the location includes the step of selecting a media engine based on load and status (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**).

18. Regarding **claim 19, DeFreese-Wilson** further disclose: wherein the first media engine has reached a predetermined maximum capacity when a second media console requests streaming of the same segment further comprising the steps of:

directing a third media engine to fetch the segment, specifying a fourth media engine from which the segment is to be replicated (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting a copy by the third media engine of the segment from the fourth media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

sending the segment from the fourth media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

replying to the second media console redirecting to the IP address of the third media engine (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting by the second media console of playing of the stream **(DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active**

listings/timings and messaging/warning mechanisms); and,

responding by the third media engine forwarding data for the segment to the second media console **(DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms).**

19. Regarding **claim 20, DeFreese-Wilson** further disclose: further comprising the steps of: sending a copy done from the third media engine to the MD when copying of the segment from the fourth media engine to the second media engine is complete **(DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms)**; and,

notifying the MLR of the new location for the segment **(Wilson: Fig. 11-12 and Abstract; PID and program tables).**

20. Regarding **claim 21, DeFreese-Wilson** further disclose: wherein the media director has directed the first media engine to fetch the first segment and wherein the step of redirecting occurs during receipt of the segment and the step of streaming data from the first media engine further comprising the steps of:

receiving a fast forward request of the stream from the media console **(DeFreese: Fig. 14, 16 & 30 and Abstract; interactive program guide, comprehensive channel navigator and advanced configuration controls and NVOD with fast forwarding)**;

identifying the potential for a streaming error if the fast forward exceeds the portion of the segment which has been received by the media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63; NVOD and messaging/warning system**);

notifying the media director of the impending error state (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings and messaging/warning mechanisms**);

replying to the media engine with the identification of a third media engine having the entire segment (**Wilson: Fig. 11-12 and Abstract; PID and program tables**);

requesting of the third media engine a swap identifying the media console in current communication (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63; NVOD and messaging/warning system**); and,

streaming of data by the third media engine from the segment to media console (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63; NVOD and messaging/warning system**).

21. Regarding **claim 22, DeFreese-Wilson** further disclose: wherein the third media engine has also been streaming further comprising the steps of;

returning from the third media engine a swap identifying a second media console in communication; and, streaming of data by the first media engine to the second media console (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63; NVOD and messaging/warning system**).

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22. Regarding **claim 23, DeFreese-Wilson** further disclose: wherein segments associated with a program have been identified as unneeded further comprising the steps of:

requesting by the media director of deletion of the program to the media location registry; responding from the media location registry with an approval of the program deletion; generating an internal deletion message to a media engine having the segments associated with the program; sending a message to the MLR confirming the deletion; and, updating the location database (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63 and col. 17 line 66- col. 18 line 4; NVOD, messaging/warning system and deleted or replaced channels**).

23. Regarding **claim 24, DeFreese-Wilson** further disclose: wherein the deletion request has come from a first media station and the step of responding further comprising the steps of: determining that saving the program is desirable; directing transfer of the program to a second media station having surplus storage availability; directing a program move to a second media director identifying the first media station currently requesting the deletion; querying by the second media director of the first station media director to find the segments associated with the program; responding from the media director with the segment locations on a first station media engine; directing through the second media director a second station media engine to fetch the segments; sending a copy request from the second station media engine to the first station media engine; sending the segments from the first station media engine to the second station media engine; notifying the second media director when copying of the

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segments is complete; notifying the MLR of the new segment locations; and, requesting deletion of the program by the media director from the MLR (**DeFreese: Fig. 14, 16 & 30 and Abstract and Col. 7 lines 33- 63 and col. 17 line 66- col. 18 line 4; NVOD, messaging/warning system and deleted or replaced channels**).

24. Regarding **claim 25, DeFreese-Wilson** further disclose: further comprising prior to the step of redirecting the steps of:

requesting by the media console of a security token from a security authentication server on the network; confirmation of subscriber authentication for the media console; and, issuing the security token based on the subscriber authentication; and the step of redirecting further includes the steps of:receiving the security token from the media console;confirming the security token with respect to the streaming request (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings, PIN entries and messaging/warning mechanisms**).

25. Regarding **claim 26, DeFreese-Wilson** further disclose: further comprising the steps of:

authenticating each media engine by an authentication server;
supplying a second security token to each authenticated media engine; and
wherein the step of requesting a copy of the segment includes receiving the second security token from the receiving media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings, PIN entries and messaging/warning mechanisms**).

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26. Regarding **claim 27, DeFreese-Wilson** further disclose: further comprising the steps of:

authenticating each media engine by an authentication server;

supplying a second security token to each authenticated media engine; and

wherein the step of requesting a copy of the segment includes receiving the second security token from the target media engine (**DeFreese: Fig. 14, 16 & 30 and Abstract; near video on demand, program active listings/timings, PIN entries and messaging/warning mechanisms**).

As per **claims 1-9** they list substantially the same elements as those recited above in **claims 10- 27** and are therefore rejected with the same rationale as applied to **claims 10- 27**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MACEEH ANWARI whose telephone number is (571)272-7591. The examiner can normally be reached on Monday-Friday 7:30-5:00 PM ES.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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M.A.

/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444